

Claims:

1. A milking machine cylinder comprising a flexible element and at least one sensor element which detects at least a substantial weight relief of the flexible element in order to trigger a start signal for a milking process.
2. The milking unit cylinder according to claim 1, characterized in that a start signal is emitted as the weight relief of the flexible element exceeds a predetermined threshold value.
3. The milking unit cylinder according to claim 1 or 2, characterized in that the predetermined threshold value is variable.
4. The milking unit cylinder according to at least one of the preceding claims, characterized in that the predetermined threshold value is independent of an operating vacuum.
5. The milking unit cylinder according to at least one of the preceding claims, characterized in that at least one biasing element is provided.
6. The milking unit cylinder according to at least one of the preceding claims, characterized in that the predetermined threshold value is influenced by the biasing element.
7. The milking unit cylinder according to at least one of the preceding claims, characterized in that the flexible element is coupled to a movable element such as a sleeve or a piston.
8. The milking unit cylinder according to at least one of the preceding claims, characterized in that the flexible element is configured as a chain or a rope.
9. The milking unit cylinder according to at least one of the preceding claims, characterized in that the flexible element is coupled to the milking unit.
10. The milking unit cylinder according to at least one of the preceding claims wherein at least one sensor element is selected from a group of sensors comprising load

measuring means, proximity switches, magnetic limiting switches, dry reed contact switches, expansion measuring strips, magnetic, inductive, capacitive sensors and resistance sensors and the like.

11. The milking unit cylinder according to at least one of the preceding claims, wherein at least a portion of the sensor element is mounted within the cylinder.
12. The milking unit cylinder according to at least one of the preceding claims wherein the sensor element works contactless.
13. A milking unit cylinder, characterized in that at least one rapid ventilation is provided that is controlled through a membrane which membrane can be brought at least into an open position and into a closed position.
14. The milking unit cylinder according to claim 13, characterized in that for controlling the rapid ventilation, a control port with separate control air is provided.
15. The milking unit cylinder according to claim 13 or 14, characterized in that for controlling the membrane, a control port with separate control air is provided.
16. The milking unit cylinder according to claim 13, 14 or 15, characterized in that the rapid ventilation is controlled by means of a rapid ventilation valve.
17. The milking unit cylinder according to at least one of the claims 13 to 16, characterized in that a biasing means is provided that biases the membrane in the direction of the closed position.
18. The milking unit cylinder according to at least one of the claims 13 to 16, characterized in that the membrane can be displaced into a ventilation position where air can be supplied through at least one rapid ventilation aperture.
19. The milking unit cylinder according to at least one of the claims 13 to 18, characterized in that on one side of the membrane an interior space of the milking unit cylinder is provided in which a piston is mounted.
20. The milking unit cylinder according to at least one of the claims 13 to 19, characterized in that on the other side of the membrane a membrane control port is mounted.

21. The milking unit cylinder according to at least one of the claims 13 to 20, characterized in that the membrane can be placed in the ventilation position by applying atmospheric pressure in the interior space and by applying subpressure to the membrane control port.
22. The milking unit cylinder according to at least one of the claims 1 to 12, characterized in that at least one rapid ventilation with a rapid ventilation valve is provided which can be placed at least into an open position and a closed position.
23. The milking unit cylinder according to claim 22, characterized by a rapid ventilation configured according to at least one of the claims 13 to 21.
24. A method for automatically starting a milking process wherein holding a milking unit triggers a start signal and rapid ventilation occurs.
25. The method according to claim 24 wherein lifting a milking unit triggers a start signal.
26. The method according to claim 24 or 25 wherein rapid ventilation occurs through additional ventilation apertures.
27. The method according to claim 24, 25 or 26 applying a device according to at least one of the claims 1 to 23.
28. A method for rapid ventilation of a milking unit cylinder where air intake through a membrane is released, in particular when applying a device according to any of the claims 12 to 23.